Spare parts in the CERN Cooling and Ventilation group

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Asset and Maintenance Management Workshop
CERN, 13-15 November 2013
AGENDA

Store overview
- Staff and Locations
- Different Users
- Statistics
- Problematic

Spare Part Workflow

Store Management
- KPI’s
- Order quantities
- Assets management
- Standardisation
- Future Improvements

Summary
Store staff and locations
Store Statistics 2013 (Jan to Oct)

Total number of references : 31 795
Number of active references : 25 422
Number of active references currently in stock: 11 647 (46%)
Number of active pieces currently in stock: 87 707

Number of work orders with transactions : 5 090
Number of different references moved : 1 966
Number of pieces moved : 37 865
Issues

- Quantity of CV installations
- Installations still in operation that were build since 50’s
- Obsolete spares
- Long replies to quote requests & delivery time
- Wrong deliveries
- Part deliveries in France and Swiss
- Administrative delay
- Internal procedures
- Badly defined requests / communication
- Resources
SPARE PART WORKFLOW

RESERVATION

PROVISIONING

RECEPTION

STORAGE

RETRIEVAL
SPARE PART WORKFLOW

RESERVATION

PROVISIONING

RECEPTION

STORAGE

RETRIEVAL

PICK TICKETS
SPARE PART WORKFLOW

RESERVATION

PROVISIONING

RECEPTION

STORAGE

RETRIEVAL
SPARE PART WORKFLOW

RESERVATION → PROVISIONING → PURCHASE ORDERS → REQUISITIONS

RECEPTION

STORAGE

RETRIEVAL
SPARE PART WORKFLOW

RESERVATION

PROVISIONING

RECEPTION

STORAGE

RETRIEVAL
STORES MANAGEMENT
Order Management
Key Performance Indicators

To follow:
• The trends of the spare part total and minimum quantities
• The part delivery times
• The time to process PO’s and PT’s
• Numbers of returns
• Most used parts

KPI’s implemented in 2013, fully operational in 2014
Key Performance Indicators

10 different store KPIs:
01: Ratio STOCK MINI / all articles
02: Ratio references en stock / all articles
03: Ratio Real leadtime / planned order leadtime
04: Ratio number ODMs with transaction / total number of completed ODMs
05: Ratio number POs in CHF / number POs in EUR
06: Average duration PO from creation to reception in days
07: Average duration PT from created to closed (U->C) in days
08: Number of returned references/pieces
09: Sum of all top ten consumables
10: Sum of all top ten parts
Assets
Management

Standardisation

- Organising storage of spares according to their use
- GMAO: adding classes
- Informatics tools: pick tickets and purchase orders
- Procedures
- Equipment: instrumentation partially standardised
- Removing ‘sleeping’ spares from store
Future Improvements

Standardisation

Definition of critical elements / parts in EAM
Thanks to different forms of standardisation the work flow is fluent today with a good traceability.

Thanks to the KPIs we’ll have soon data to improve even more.
Back-up slides
Workflow

Reservations

<table>
<thead>
<tr>
<th>Part Details &amp; Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port: F37-18-800</td>
</tr>
<tr>
<td>VOGEL ensemble pomp 64 BHE 14-13inox + moteur 5</td>
</tr>
<tr>
<td>Planned Qty: 1</td>
</tr>
<tr>
<td>Planned Source: Stock</td>
</tr>
<tr>
<td>Reserved Qty: 1</td>
</tr>
<tr>
<td>Pick Ticket: 14914</td>
</tr>
</tbody>
</table>

| Activity Trade: 5 - ELECTRO-MECHANIC |
| Store: F006 |
| Available: 0 |
| Allocated Qty: 0 |

<table>
<thead>
<tr>
<th>Pick Ticket Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick Ticket: 14914</td>
</tr>
<tr>
<td>Remplacement pomp 1</td>
</tr>
<tr>
<td>Store: F006</td>
</tr>
<tr>
<td>Status: Unfinished</td>
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<tr>
<td>Date Required: 25-SEP-2013</td>
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</table>

| Work Order Activity: 19593593 |
| Equipment: FTDP-00508         |
| Deliver to Supplier:         |
| Originator: CARHUERO          |
| Approved By:                  |
| Total Value: 4,351.00 CHF     |

| Delivery Address:             |
| Deliver to Employee:          |
| Default Approver:             |
| Date Approved:                |
Workflow

Provisioning
Reception

Workflow

**PO Receipt: 11558 JUMO RECHARGE**

**Receipt Details**
- **Purchase Order:** 11549
- **Supplier:** JUMOSAS
- **Store:** F006
- **Class:**
- **Status:** Approved
- **Date Received:** 21-MAY-2012 05:39
- **Received By:**
- **Date Last Updated:** 21-MAY-2012

**Additional Info**
- **Total PO Receipt Lines:** 2

**Shipping Details**
- **Ship Via:**
- **Location:**
- **Freight:**
- **Packing Slip:**

**Part** | **Description** | **Part No.**
---|---|---
F08-05-127 | JUMO pneumatik 15.0 PEOPLE | 2 pc
F07-05-020 | JUMO convertisseur de mesure de temp. type TFL | 2 pc

- **PO Line:** 5
- **PO Org:**
- **Line:**
- **Supp. Catalog Reference:**
- **Outstanding Qty:**
- **UOP:**
- **Reorder Qty. (UOP):**
- **Reorder Qty. (UOP):**

**Updated By:** CD24K
Storage
### Workflow

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**Retrieval**

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**Pick Ticket - Print**

- **Pick Ticket**: 15164 Remplacement mano AD
- **Store**: F006
- **Work Order**: 19683640 ED53 : pose de manos sur le réseau AD target
- **WO Scheduled Start Date**: 04/11/2013
- **Activity**: 5
- **Originator**:
- **Default Approver**:
- **Approved by**: FCHERUBI
- **Approval Date**: 05/11/2013
- **Date Required**: 05/11/2013
- **Equipment**: FDED-00053
- **Status Pick Ticket**: Closed

<table>
<thead>
<tr>
<th>Bar Code Part</th>
<th>Part</th>
<th>Description</th>
<th>Price</th>
<th>Qty</th>
<th>Value</th>
<th>Qty Issued</th>
<th>Uom</th>
<th>Bin</th>
<th>Bin Qty</th>
<th>Manufacturer</th>
<th>Manufacturer Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>F31-06-043</td>
<td></td>
<td>CERN robinet porte manometre 1/2G acier noir siege inox avec vis de purge</td>
<td>37.00</td>
<td>2</td>
<td>74.00</td>
<td>pc</td>
<td></td>
<td>939-25-C</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Value**: 74